

**Paper reference 31760H**  
**Pearson BTEC Level 3**  
**Nationals Extended Certificate**  
**Foundation Diploma,**  
**Diploma, Extended Diploma**

Total Marks

**Information Technology**  
**UNIT 1: Information Technology**  
**Systems**

**Friday 9 June 2023 – Morning**

**Time: 2 hours**

**In the boxes below, write your name, centre number and learner registration number.**

<b>Surname</b>							
<b>Other names</b>							
<b>Centre Number</b>							
<b>Learner Registration Number</b>							

**Y70532A**



**Pearson**

**YOU MUST HAVE:  
Nil.**

**YOU WILL BE GIVEN:  
Data Book.**

## **INSTRUCTIONS**

- **Answer ALL questions.**
- **Answer the questions in the spaces provided in this question paper or in the Data Book – there may be more space than you need.**

## **INFORMATION**

- **The total mark for this paper is 90.**
- **The marks for EACH question are shown in brackets – use this as a guide as to how much time to spend on each question.**
- **There may be spare copies of some diagrams.**

## ADVICE

- **Read each question carefully before you start to answer it.**
  - **Try to answer every question.**
  - **Check your answers if you have time at the end.**
-

**ANSWER ALL QUESTIONS.  
WRITE YOUR ANSWERS IN THE SPACES  
PROVIDED.**

- 1. Media students in a school create information and event materials.**
  - (a) The media students use word processing software to create the materials.**
    - (i) Identify TWO OTHER types of software the media students could use to produce the materials.**  
**(2 marks)**

**Answer space continues on the next page**

**TYPE 1** \_\_\_\_\_

**Question 1 (a) (i) continued**

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**TYPE 2** \_\_\_\_\_

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**(continued on the next page)**

**Question 1 (a) continued**

- (ii) Explain TWO benefits of using word processing software to create the materials.  
(4 marks)**

**Answer space continues on the next page**

**BENEFIT 1** \_\_\_\_\_

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**Question 1 (a) (ii) continued**

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**BENEFIT 2** \_\_\_\_\_

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**(continued on the next page)****Turn over**

## Question 1 continued

**(b) The students at the school use the internet to research projects. The headteacher is concerned about malware.**

**One type of malware is a virus that is designed to spread from one computer to another by replicating itself.**

**Explain TWO OTHER types of malware.**

**(4 marks)**

**Answer space continues on the next 2 pages**

**TYPE 1** \_\_\_\_\_

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**Question 1 (b) continued**

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**TYPE 2**

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**Question 1 (b) continued**

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**(continued on the next page)**

**Question 1 continued**

**(c) The headteacher wants to use an online web form to gather data from students and their parents.**

**Explain THREE implications that should be considered when designing the web form.**

**(6 marks)**

**Answer space continues on the next 2 pages**

**IMPLICATION 1** \_\_\_\_\_

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## **Question 1 (c) continued**

IMPLICATION 2 \_\_\_\_\_

# Turn over

**Question 1 (c) continued****IMPLICATION 3** \_\_\_\_\_

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## Question 1 continued

- (d) Discuss how the teachers can use IT to enhance teaching and learning.  
(6 marks)**

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**15**

**Question 1 (d) continued**

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**Question 1 (d) continued**

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**(Total for Question 1 = 22 marks)**

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2. Luca runs a family business from home. His two children study at a college.

- (a) Luca has purchased laptops for the family that do not have any software installed.

**Explain the terms  
‘application software’ and  
‘systems software’.  
(4 marks)**

Answer space continues on the next 2 pages

## **APPLICATION SOFTWARE**

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## Question 2 (a) continued

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## SYSTEM SOFTWARE

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**Question 2 (a) continued**

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**(continued on the next page)**

**Question 2 continued**

**(b) Luca is considering installing open–source system software.**

**(i) Explain TWO advantages of installing open–source system software rather than proprietary system software.  
(4 marks)**

**Answer space continues on the next page**

**ADVANTAGE 1** \_\_\_\_\_

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## **Question 2 (b) (i) continued**

# ADVANTAGE 2

**(continued on the next page)**

# Turn over

**Question 2 (b) continued**

- (ii) Explain ONE disadvantage  
of installing open-source  
system software.  
(2 marks)**

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**Question 2 (b) (ii) continued**

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**(continued on the next page)**

**Question 2 continued**

**(c) Luca wants to ensure the data on the laptops is protected and secure.**

**(i) One way Luca could protect the data is to use antivirus software.**

**Describe how the features of antivirus software will protect the data on the laptops.**

**(4 marks)**

**Answer space continues on the next 2 pages**

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**25**

**Question 2 (c) (i) continued**

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**Turn over**

**Question 2 (c) (i) continued**

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**(continued on the next page)**

**Question 2 (c) continued**

**(ii) One threat to the security of data is phishing, which tricks victims into handing over sensitive information.**

**Discuss OTHER threats to data.**

**(8 marks)**

**Answer space continues on the next 3 pages**

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## **Question 2 (c) (ii) continued**

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**Question 2 (c) (ii) continued**

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**30**

**Question 2 (c) (ii) continued**

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**(Total for Question 2 = 22 marks)**

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**Turn over**

**3. Craig is the manager of a leisure centre.**

**A new network is to be installed.**

**The leisure centre includes:**

- **a storeroom**
- **a reception area for the staff to take bookings**
- **an office where all administration work is undertaken**
- **a members' area with wireless laptops for use by members.**

**Craig and his staff have access to tablets that they use for personal training sessions and classes.**

**(continued on the next page)**

## Question 3 continued

(a) On the blank space provided for Question 3 (a) in the separate Data Book, draw a diagram to show the integration of systems and software used in this process.

The diagram should include devices and systems that are used, including:

- a server in the storeroom
- 2 desktop PCs in the reception area with wired connections
- 2 desktop PCs and a printer in the office with wired connections
- 3 laptops in the members' area with wireless connection to the internet

(continued on the next page)

**Question 3 (a) continued**

- 3 tablets with wireless connection**
  - connection type(s) used**
  - annotations.**
- (6 marks)**

**(continued on the next page)**

**Question 3 continued**

**(b) A single-user, multitasking operating system is installed on the tablets.**

**Describe THREE OTHER types of operating system.**

**(6 marks)**

**Answer space continues on the next 2 pages**

**TYPE 1**

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## **Question 3 (b) continued**

# TYPE 2

**Question 3 (b) continued**

**TYPE 3** \_\_\_\_\_

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**Question 3 continued**

- (c) Members can pay for classes via the leisure centre's website using their credit or debit card.**

**Describe how SSL/TLS protocols are used to secure this process.  
(4 marks)**

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**Question 3 (c) continued**

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**Turn over**

## Question 3 continued

**(d) Many factors influence the leisure centre's choice for the new network.**

**PURCHASE COST and SECURITY are two of these factors.**

**Discuss OTHER factors that should be taken into consideration.**

**(8 marks)**

**Answer space continues on the next 3 pages**

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## **Question 3 (d) continued**

# Turn over

## **Question 3 (d) continued**

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**Question 3 (d) continued**

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**(Total for Question 3 = 24 marks)**

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**4. Seren Health Centre has a computerised patient details system.**

**The health centre uses processes to protect its system and patients' data.**

**One process it uses is username and password authentication.**

- (a) Discuss OTHER processes the health centre could use to protect its system and patients' data.**

**You need to consider:**

- file permissions**
- access levels**
- backup and recovery procedures**
- physical access control.**

**(10 marks)**

**Answer space continues on next 5 pages**

**Question 4 (a) continued**

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**Turn over**

## **Question 4 (a) continued**

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## **Question 4 (a) continued**

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## **Question 4 (a) continued**

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**Question 4 (a) continued**

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**(continued on the next page)**

## Question 4 continued

**(b) The health centre uses social media to keep patients up-to-date on important information about the health centre.**

**Evaluate the advantages and disadvantages of the use of social media in the healthcare sector.  
(12 marks)**

**Answer space continues on next 5 pages**

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## Question 4 (b) continued

# Turn over

## **Question 4 (b) continued**

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## **Question 4 (b) continued**

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**Question 4 (b) continued**

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**(Total for Question 4 = 22 marks)**

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**TOTAL FOR PAPER = 90 MARKS**

**END OF PAPER**

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